Department of Energy
Washington, DC 20585
January 11, 2000

Mr. Stephen Luftig, Director
Office of Emergency and Remedial Response
U.S. Environmental Protection Agency
Washington, D.C.

Dear Mr. Lufting,

The Department of Energy is pleased to submit the attached comments on the U.S. EPA's draft guidance document, *"Comprehensive Five-Year Review Guidance"* (OSWER Directive 9355.7-03B-PPB99-963214 Draft, October 1999). Personnel in EPA's Office of Emergency and Remedial Response requested DOE staff to review this document by December 21, 1999. Subsequently, that date was extended until January 11, 2000. I'd like to express the Department's appreciation for the opportunity to comment on the draft, and extend my thanks to you and your staff for the extension of the comment period.

The Department formed a Focus Group consisting of senior environmental protection specialists from the Offices of Environment Safety and Health, and Environmental Management, plus representatives from DOE field organizations to review the draft and develop the attached comments. Your staff, under the leadership of Ms. Carol Bass, was kind enough to visit DOE Headquarters in December 1999, to brief the Focus Group on the nature and content of the draft.

The draft guidance appears to be significant for DOE and other federal sites undergoing cleanup pursuant to the Comprehensive Response Compensation and Liability Act, and the Resource Conservation and Recovery Act. Our Focus Group found that while the document is helpful in terms of understanding statutory requirements and policy expectations, it appears to have emphasized these issues from the perspective of an EPA Superfund site. While this is certainly understandable, the unique issues affecting large-scale federal environmental restoration sites are too significant to be adequately interpreted by project managers using only the current draft. Some of the current draft language is likely to make implementation at DOE and other federal sites a difficult, expensive, and potentially burdensome process.

For example, the Department has many questions and concerns about the apparent scope of work that could be required by the EPA Regions at large-scale federal sites. The attached comments provide EPA with information on how DOE does its work under its existing agreements with EPA Regions, and provides suggestions about how the guidance could be revised in ways that will not conflict with, or unnecessarily burden the implementation of these carefully worked-out agreements.

The Department's other major concern centers on provisions that could form the basis for necessitating significant changes to previously selected remedies. For example, the document suggests that new human health and/or ecological risk assessments might have to be performed, and new, more stringent standards might have to be imposed in order to ensure that remedies are protective of human health and the environment. The Focus Group commented on how certain provisions could amount to a *de novo* approach to remedy selection, and point out potentially damaging effects of unforeseen consequences on implementation of existing Federal Facility agreements. Our comments also suggest ways that the guidance could be improved to avoid some of overly burdensome implementation requirements.

Finally, our comments touch on other areas of the guidance that could be improved or which require clarification, particularly those that are important to DOE's Long Term Stewardship activities.

If you have any questions about the attached comments or need additional assistance, please contact Thomas Traceski or John Bascietto of my staff at 202-586-2481 and 202-586-7917 respectively. You may also e-mail them at thomas.traceski@eh.doe.gov and *john.bascietto@eh.doe.gov*. Again, thank you for the opportunity to comment.

Sincerely yours,

Raymond P. Berube
Deputy Assistant Secretary
for Environment
Office of Environment, Safety and Health

cc: C. Bass, EPA-OERR

Enclosure

U.S. Department of Energy
Comments on EPA's Guidance Manual
"Comprehensive Five-Year Review Guidance"
OSWER Directive 9355.7-03B-P
PB99-963214
(Draft, October, 1999)

The Department of Energy (DOE) appreciates the opportunity to comment on EPA's Draft "*Comprehensive Five-Year Review Guidance."* As the DOE continues to conduct remediation activities and initiate site closure, an increasing number of sites will require five-year reviews. Given the importance and degree to which the Department expects it will be necessary to understand and apply the information in the document, comments have been provided, by subject matter, below.

Comments on the "*Comprehensive Five-Year Review Guidance"* are organized into 11 sections:

- Level of Effort
- Statutory vs. Policy Reviews
- Content of Five Year Reviews
- Roles and Responsibilities
- Information Management
- Stakeholders
- Definition of Scope
- Cost Information
- Changes in Science and Technology
- Reviewing Institutional Controls
- Risk Assessment

Level of Effort

1. The draft guidance should more clearly communicate the level of effort required to conduct five-year reviews, including when a greater degree of effort is anticipated and when less effort is appropriate.

    - At many DOE sites, waste management, remedial and/or corrective action projects are or will be ongoing when a five-year review will be due. It is likely in these cases, that some amount of project resources will have to be diverted to performing the required five-year review. Therefore, in the interests of promoting efficient use of limited project resources, the guidance should clearly state the intended level of effort at sites in various stages of work, e.g.: 1) no investigation yet available for the operable unit (i.e., the OU is part of a larger site where remedies have been selected or constructed); 2) investigation is completed, but no remedy constructed yet; 3) construction or operation of remedial or corrective actions is ongoing; 4) closed out projects. The guidance should provide examples of these situations, and show that they may require more and less effort.

- It seems that the requirement to begin five-year reviews while the remedy is still under construction may be unreasonably burdensome if the review requires a significant dedication of resources. Facilities that are in construction and performing initial start-up testing have typically committed or over-committed their resources to those tasks. The requirement to review the remedy prior to start-up may result in delays in implementation. Additionally, during the construction and start-up phases of the remedy, many sites are committed to their established monitoring programs and the associated reporting and/or start-up reviews and assessments. Also, intensive early phase monitoring to ensure that the remedy is performing as designed is a resource intensive task that could be adversely affected by having to do a five-year review. It does not seem that having to do a five-year review and write another report at such times will result in any improvements to the remedy.

- In Section 3.1, include a discussion on how different remedies could require different levels of effort. The review of an engineered surface barrier, for example, should focus on whether the cap is functioning as intended, e.g., the integrity of the cap and the implementability of any required institutional controls. The latter two factors will have much greater impact on protectiveness of a remedy than whether the ARARs, TBCs or toxicity values have changed.

- The discussions on necessary analyses and related reporting formats could be construed (and therefore implemented) as if project closure is just the <u>beginning</u> of the CERCLA process, rather than the <u>end</u>.

    - The review should primarily be focused on the defined problem that required action, how pathways to receptors have been blocked, and the key assumptions (e.g., land use) contributing to the protectiveness of the remedy.

    - The draft guidance could be interpreted to mean that risk-based cleanup standards and risk assessments should always be recalculated if any assumption or standard method has changed. The guide should clarify when these efforts are truly appropriate.

2. The guide should specify how to handle disagreements on the need for additional information or data above and beyond what was agreed to as part of the project closure process.

3. The guide should more fully discuss the importance of scaling back monitoring and other activities as our confidence in the long-term effectiveness of a remedy grows over time.

4. In the discussion of the review of activities at large or complex federal installations, the guide suggests that the DOE would be required to report on the status of actions <u>not</u> yet implemented as part of an effort to provide an overview on the progress of cleanup across the entire site, rather than simply report on those

remedies in place as the statute requires. The level of effort associated with reviewing actions not yet implemented must be clearly defined. As currently written, the draft guidance could easily be misinterpreted to mean that a full five-year review should be conducted for these actions. The guidance should clearly state that EPA's expectation is that only an overview or summary (of perhaps only several paragraphs at most) of the progress of the cleanup will be sufficient to satisfy five-year review requirements in cases where selected actions have not yet been implemented.

5. Section 1.5.1 indicates that an entire *site* is subject to a statutory review if any of its remedial actions is subject to a statutory review. EPA should more specifically define the term "*site*." This term has different meanings to different personnel in different contexts, and certain interpretations of the term "*site*" could result in a much greater level of effort than would be otherwise required. If "*site*" is defined by current geographic boundaries, then the process could become very burdensome for sites that may be undergoing both remediation and long term stewardship (LTS) activities; this must be avoided in order to preserve resources that could otherwise be applied to protecting human health and the environment.

6. The guidance should distinguish between the level of effort required at a site or operable unit having *uncertainty management plans* (a.k.a. "*contingent plans*" or "*contingent remedies*") and one without such plans. These plans typically specify "new" conditions as possible deviations from expected conditions and provide for contingent actions if the specified "new" condition is found. As an example of how the existence of contingent plans might effect the requirements for a five-year review, consider the following: in section 4.2.2 (pages 4-8 and 4-10), the guidance states that "a risk assessment may be appropriate if the remedial action objectives stated in the ROD are sufficiently comprehensive to cover these new conditions and the remedy may not already be providing adequate protection of human health and the environment." However, if the agency or party conducting the remedial action has already identified the "new" conditions as possible deviations from expected conditions, and has reached agreement with their regulators to implement a contingency plan if these conditions are indeed found to exist; or if the parties, including the regulators, can determine that new conditions require additional action without a risk assessment, then the risk assessment should not be conducted as part of the five-year review.

7. Draft exhibit 4-3 provides a flow diagram for evaluating changes in standards, which may lead to conducting inappropriate work. The draft guidance asks the question "Can the remedy meet the new standard?" before asking "Is the remedy still protective?" A review following this logic may drive the site to achieve new standards unnecessarily, perhaps requiring substantial additional funding, when the current remedy was already protective of human health and the environment. It is requested that EPA modify the logic flow of draft exhibit 4-3, substituting in its place the logic flow provided in **Attachment A** to these comments.

8. There is a fair amount of flexibility given in the guidance as regards the degree of effort/ activities needed to support the five-year review (e.g., the need for additional sampling, or *who* needs to be interviewed). Although this can be good,

it also can lead to a lot of second-guessing. The guidance should encourage EPA regional offices to work with DOE sites and other federal installations to secure agreement on the review methodology before the five-year review begins.

- As reviews require USEPA concurrence, review plans should be developed prior to performing the review and agreement reached so that at the end of the review USEPA is concurring (or not concurring) with the conclusions of the review based on the information collected, and not questioning the methodology of the review itself.

Statutory vs. Policy Reviews

1. Policy reviews should be conducted based on site-specific negotiation resulting from actual need, instead of by default to a potentially expensive and unnecessary effort, or conversely, doing an insufficient review (e.g., at federal sites undergoing long term stewardship (LTS) activities, one-time policy reviews of pre-SARA sites and removal action DOE sites may not be sufficient.

   - Section 1.3.8 indicates that five-year reviews are conducted as a matter of policy for "monitored natural attenuation" sites where the remedy objective is to attain cleanup levels appropriate for unrestricted use. Because of the nature of LTS activities on DOE sites employing monitored natural attenuation, it would be preferable to have a less rigid structure and tailor the five-year review process to specific LTS needs.

2. Site-specific agreements may provide that DOE will conduct cleanup under CERCLA over an entire site even though only portions of the site are listed on the NPL (e.g., Hanford). It is not clear how to determine "statutory" vs. "policy" under this circumstance. It is requested that the guidance clarify how to determine the "statutory" vs. "policy" review question in this type of situation.

3. **Appendix A** indicates that EPA may choose to conduct a policy review at a site with a no action ROD where monitoring is taking place to ensure the absence of contaminants, or for no action sites where the assumptions behind the no action decision may have changed. Similarly, EPA *may* (but is not required to) conduct policy reviews of sites where only removal actions have taken place. The guidance document should provide specific examples of when such reviews would be indicated

Content of Five Year Reviews

1. The guidance should make it clear that it is not the intention or purpose of the five-year review report(s) to duplicate pre-action documents or post-action decisions, especially those requiring public comment. If a five-year review reveals the need for a ROD amendment or to take remedial action (to replace an insufficient

removal action), the review should focus only on the need for the new action. The performance of a new risk assessment or a new remedy evaluation should not be the focus of a five-year review. These are efforts, which would require public comment and would presumably be conducted separately if needed. The purpose of the five-year review should be limited to ensuring that the remedy remains protective of public health and the environment, and if not, to make recommendations for further studies or actions.

2. Five-year review reports should *add* knowledge to previous and concurrent reviews, rather than duplicate or overlap with them, particularly with respect to the timing of their issuance. For example, it is conceivable that at complex federal sites, a five-year review might overlap or duplicate a RCRA corrective action permit report, an NPL closeout report, or a NEPA analysis. EPA should encourage five -year review report writers to avoid "documentation overload" by suggesting:

   - Inclusion of the ROD or other decision document as an attachment, taking the place of the "Background" section. The five-year review then can focus on the more important current and future situation at the site.

   - When concurrent reviews or reports coincide with the five-year review, the documents should be combined if appropriate, saving expense and effort for regulators, stakeholders and the federal lead agency.

3. Guidance for conducting interviews (Section 3.3.2) indicates the need to collect information on "potential changes in land and resource use" and "early indicators of potential remedy failure." EPA should specify what type of information is called for in this regard and how it can be an indicator of remedy failure. This would aid in the interpretation of the data.

4. In instances where the remedial action has not yet begun (Section 4.1.1) there is the potential that the guide can be interpreted to recommend discussing remediation scope. Scope may already be, and is more appropriately addressed in the RI/FS (i.e., description of source, media, and contaminants of concern). Again, particularly for sites where there is a mix of projects (i.e., some having units where remedial construction has begun or remedies are operating, and others not yet having constructed a remedy), the guide should clearly state that the level of effort for the five-year review report should be weighted towards those projects where remediation has occurred and an assessment of it's performance has been accomplished. Where remedy construction is incomplete, duplication of existing remediation scope documentation should be avoided. Only summaries of existing documents like the RI/FS (or the attachment of it) should be required.

Roles and Responsibilities

1. The guidance indicates that five-year review for DOE sites are conducted by DOE in accordance with Executive Order 12580 (see Exhibit 2-3 and Appendix H.) Sections 1.8.2 and 2.5.2 indicate that a federal agency conducting a five-year review should submit the report to EPA pursuant to the terms of the federal facility agreement and that EPA will issue a memorandum of concurrence or non-concurrence**.**

    - The guidance suggests, but does not explicitly state the reasons or circumstances under which EPA would non-concur with a five-year review authored by another federal agency. Presumably, EPA non-concurrence would occur under two circumstances: 1) when EPA disagrees with the federal agency's conclusion that the remedy is protective; or, 2) EPA disagrees with the recommendations for new actions to address the reported deficiencies. If there are any other circumstances, which could result in non-concurrence by EPA, the guide should specify them.

    - It is also unclear what the consequences of non-concurrence are. The guide should specify them.

2. The guidance should specify the conditions for granting, and the process for issuing a Technical Impracticability Waiver (TIW). The Department presumes that a TIW is normally part of any Record of Decision approved by EPA, and therefore the DOE would not have need of obtaining additional EPA approval of a TIW should one be required as a result of requiring new actions in a new or revised ROD. If this is not correct, the guidance should specify the process for obtaining approval of a Technical Impracticability Waiver.

3. The guidance should clarify the level of autonomy for the five-year review that EPA will give to federal facilities. It appears that the five-year review process could be largely a self-reporting process for DOE dependent upon the specific terms of the Federal Facility Agreement (FFA) (see Exhibits 2-1 and 2-3).

4. In many cases the Department has plans of selling or transferring sites once remediation is complete. The guidance refers to the concept of an "ongoing presence," but this concept does not address the issue of selling the site or transferring site ownership to another agency. The guidance should address who will be responsible in these cases, for filling gaps in information necessary for five-year reviews.

5. It is unclear to what extent DOE retains the lead agency role for five-year reviews in circumstances where sites have been sold or otherwise transferred to other public or private entities. The guidance should clarify this.

Information Management

1. The guidance does not name all the necessary documents for conducting the review, and the process for ensuring that they are readily available. Should the

review include records from the operational period as well as records generated during clean up and long term stewardship? A comprehensive listing of minimum record series to be retained, including the retention time, should be provided.

2. The five-year review might be a good time to update the administrative records for the site. The guidance should clarify the administrative record requirements for the review.

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3. EPA provides much of the information that might be needed by persons performing and reviewing five-year reviews on the Internet. Consider adding Internet addresses to these sources of information.

Stakeholders

1. The guidance on community involvement (Section 3.2.3 and Appendix F) does not appear to fit the DOE model. The guidance indicates that the five-year review may be the last time that the agency interacts with the public until the next five-year review. However, at large federal sites, this would not be the case. DOE installations have site-specific advisory boards (SSABs) and other stakeholder organizations (e.g., State, local and Tribal governments) that are anticipated to be involved in the LTS process, from developing the scope of the review to participating in the development and concurrence of the review report.

    - It was difficult to understand the level of public involvement expected in the five-year review process. In general, it appears that the community is simply "informed" as the process moves ahead. However, in certain parts of the guidance the community is characterized as a potential participant of the review team. Although the guidance states that community notification of the five-year review should indicate "how the community can contribute," the guidance does not spell what EPA's expectation is in this regard. How can the community contribute? Is this intended to be an open invitation to community members?

Definition of Scope

1. EPA asserts that other federal agencies that are implementing actions under CERCLA must issue polices and guidance that are "consistent with" EPA's. Using this interpretation of CERCLA Section 120, it appears that DOE and other federal agencies could be constrained from developing needed polices that allow them to carry out other legal responsibilities. The guidance should avoid broadening the statute's instructions. The Department respectfully wishes to point out that the "consistent with" interpretation is too expansive. The statutory language of CERCLA Section 120 in this regard is "not inconsistent with" (EPA's policies). DOE and other federal agencies have legitimate statutory responsibilities beyond those mandated by CERCLA, and must be able to issue policies and guidelines that the agencies deem necessary to meet those responsibilities. Therefore, to the extent that DOE's policies and guidelines address CERCLA issues, these polices and guidelines must be held to the more narrow "not

inconsistent with" construction, which is the plain language of the statute.

2. While it is clearly stated in Section 1.1 that "The main purpose of the five-year review is not to reconsider decisions made during the selection of the remedy, but to evaluate the implementation and performance of the selected remedy." the tone of the discussion related to conducting the five year review (e.g., "Depending on the significance of the changes, it may be necessary for you to reconsider estimated risk.") leaves ambiguity with respect to defining "significant changes" warranting re-evaluation of the previous decisions. The guide tends to lend itself towards identifying opportunities for re-evaluation rather than focusing on what is a significant change. For example, if a release site was previously evaluated as having a risk sufficient to warrant action, as long as action is being taken, is it really significant that the risk has changed from 2×10^{-3} to 8×10^{-3}? Further, some actions are taken to eliminate pathways rather than reduce contaminant concentrations to an appropriate level of protection. In these instances, re-evaluation of risk is of little value as long as the exposure pathway is still being effectively managed.

3. In addition to defining what is meant by "significant," other terms such as "changes" from conditions at the time of the decision and "assumptions" used in previous decision making also require definition/boundaries. Evaluating all assumptions that contributed to the RI/FS work scope lends itself to an expansion beyond the review's purpose, which is to evaluate the protectiveness of the existing response action.

4. It is not clear that the review of a"no-action" decision results in a "re-opening" of the no action decision document, or simply identifies a "new problem" warranting RI/FS activities. The guidance should clarify this.

Cost Information

1. The guidance should be more explicit on the need for and verification of cost data. Section 2.3 indicates that, "lead agencies should request that PRPs provide accurate O&M cost data … that PRPs are expending to maintain the remedy … and should provide projected O&M budgets for the subsequent five year period."

2. The guidance should indicate explicitly whether cost information should be included in the five-year review report for sites where the lead agency (e.g., DOE) is the agency that is expending the resources to maintain the remedy.

3. The guidance should indicate whether the cost data should be reviewed by an entity other than the lead agency that provides the data. As the guidance indicates that cost data may be used as an indicator of existing or impending problems with remedy performance, external review of cost data may be useful in this regard.

Changes in Science and Technology

1. Many contamination problems at DOE sites have no currently feasible remediation technology. DOE is likely to undertake a significant science and technology

development program to reduce the risk and cost associated with LTS.

- The guidance should encourage the PRP or the entity responsible for the five-year review (e.g., lead agency) to propose new technologies or strategies for containing or remediating residual contamination based on new science or technology.

Reviewing Institutional Controls

1. The guidance should address to some degree what EPA considers to constitute the failure of an Institutional Control (IC). Often these will be "layered" to ensure that they are durable and not prone to failure (from a single source). Guidance in this area is important since the IC "layers" should also act as self-correcting mechanisms that will identify weaknesses. For example, would the identification of a potential deed restriction violation, through ongoing federal oversight, constitute a failure of the institutional control? Or, would the agency's dereliction in modifying (improving) the deed restriction or performing other corrective actions constitute the actual failure?

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2. On federal CERCLA sites, there will be two classes of properties, federal land and formerly federal land; and two basic types of institutional controls, documented federal agency practices, and those related to land use control (i.e., deed/zoning restrictions).

    - Testing of the IC system is never mentioned. For example, on federal sites, can the agency demonstrate its existing institutional controls do indeed control land use, by providing documents relating to siting of new facilities, minutes of a site land use control board, digging permit system, and standard operating procedures?

    - On formerly federal sites, an will EPA conduct a title search to ascertain if property records, when retrieved, do contain proper notice, easements, chain of title requirements, and other restrictions (zoning)?

    - Zoning statutes (state and local) and any subsequent changes should also be examined for enforceability and due process (i.e., is their proper notification of holders of lesser interests, such as easements).

    - Coordination with current owners of the formerly federal property could also help indicate if the restrictions were adequately communicated.

    - The federal agency's awareness of the process or procedures for judicial enforcement of land use controls is also a topic for examination at the formerly federal sites

Risk Assessment

1. The guidance on risk assessment policy for five-year reviews appears to present a logical problem which could result in an unintended result, vis a vis the perception

of risks. Such a scenario would materialize when toxicity standards or ARARs changed to become more protective; any site that had been previously released for unrestricted use based on the old (non-protective) standards will escape the five-year review under the current EPA policy. This could amount to a situation where uncontrolled, non-protective exposures are perceived as significant risks, while controlled exposures (at federal sites, for example), could subject taxpayers to costly administrative and (potentially) substantive burdens resulting from a five-year review. Furthermore, such burdens may or may not have a health or environmental protection payoff.

2. The guidance should clearly delineate how nonresidential land use scenarios and risk management controls (e.g., institutional, engineering) factor into data needs for five-year reviews. For example, if a new ground water standard is applicable to a site after cleanup is complete, does the ARAR apply throughout the site based on residential use, or is this standard applicable at (and beyond) the boundary of the operational ground water containment system (assuming institutional controls are working to prevent human health exposure)?

3. The guidance appears to allow great latitude in reopening issues addressed during remediation (e.g., in the ROD). Given the level of detail addressed in the guidance, some sites could be required to perform a baseline risk assessment every five years, which does not seem appropriate.

4. The guidance requires the risk re-evaluation to follow Superfund's risk assessment guidance and requirements (e.g., use of IRIS, Superfund exposure assumptions, etc.). EPA guidance is in some respects, different from other available risk assessment methodologies and from the DOE's own risk assessment guidance for assessment of radionuclide risk in the context of their presence at DOE facilities. Given that some contaminants and material at DOE sites are not subject to CERCLA, and given that five-year reviews may or may not be considered "statutory" at DOE sites that are not on the NPL, the draft guidance's requirements for risk assessments may result in confusion for DOE personnel charged with performing various cleanup, LTS or operational activities at large DOE sites.

    - The guidance should specify that it is only necessary to apply the EPA risk assessment methodologies for Superfund at sites or units being addressed under CERCLA or RCRA, and then only for the CERCLA hazardous substances and/or RCRA hazardous wastes that are being addressed at that unit.

5. The five year review guidance should point out that a possible outcome, should new contaminants of concern be discovered or the risks associated with existing contaminants of concern change, is the option of changing the final land use rather than automatically recommending additional response actions.

6. Discourage the use of assertions as "protective" and "non-protective" for remedial actions being constructed or operated. Reserve these assertions until the remedial action is complete and necessary monitoring is evaluated. "Interim"

determinations should focus on schedule, consistency with the ROD, status of meeting existing clean-up levels, and a discussion on whether new levels or new Contaminants of Concern need to be evaluated.

7. The definition of "not protective" at 4.4.1 is too vague. The second criteria should be "the migration of contaminants above established clean-up standards or other regulatory limitations is uncontrolled." The existing language does not allow for a *de minimis* level of contaminants. The draft guidance could be construed in such a way as to imply that uncontrolled runoff or isolated fugitive dust scenarios would be considered non-protective, regardless of contaminant concentration.

Attachment A. A Revised Flow Diagram for Exhibit 4-3.